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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/083,839	02/27/2002	Jean-Claude Junqua	9432-000164	6211

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EXAMINER	
HARPER, V PAUL	

ART UNIT	PAPER NUMBER
2654	

DATE MAILED: 01/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/083,839	JUNQUA, JEAN-CLAUDE	
	Examiner	Art Unit	
	V. Paul Harper	2654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 December 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,5-7 and 9-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,5-7,9-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 1, 2, 5-7, and 9-12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In these claims, the examiner could not find support for "receiving two or more sentences" (claim 1), "receiving input text which includes two or more sentences" (claim 5) or "receptive of input text which includes two or more sentences and operable to determine semantic information for the input text" (claim 12). The closest teaching that the examiner could find in the specification is in paragraph [0011]: "semantic analysis refers to various techniques that may be applied to input text having three or more sentences." This teaching does not include the case of receiving only two sentences. Also note that the statement in paragraph [0014], "... at least three phrases or sentences, semantic analysis may also occur at a more granular level" concerns analysis performed after text input.

The following rejections are made by interpreting the limitations in question in view of the teachings of art the art used.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 5-7, 9, 10 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Addison et al. (U.S. Patent 6,865,533), hereinafter referred to as Addison.

Regarding **claim 1**, Addison discloses a text-to-speech system that includes a method with the following steps:

- receiving two or more sentences into a text-to-speech synthesizing system (Fig. 1, item 12; Fig. 2, item 112; abstract, converting text into speech, n.b. no limitation is put on number of sentences in the text; col. 12, lines 1-19, in this case analysis [by the artificial intelligence program] is performed on two speakers which implies at least two sentences);
- determining a topic for the sentences (Fig. 2, item 114; col. 3, lines 50-63; col. 11, lines 58-68; col. 18, lines 20-28; when processing the text, artificial intelligence rules determine general informational content [topic]);

- selecting a speaking style from a plurality of predefined speaking styles based on the identified topic, where each speaking style correlates to prosodic parameters and is associated with one or more anticipated topics (col. 11, lines 45-67; styles: male, female, methodical, etc.; col. 18, lines 20-29; determine the general informational context [topic]); col. 24, lines 15-21; a style is determined);
- converting the sentences to corresponding phoneme data (Fig. 1, item 22; col. 8, lines 33-39);
- applying prosodic parameters to the phoneme data, thereby generating a prosodic representation of the phoneme data (Fig. 1, item 28; Fig. 2; items 114, 116, 120, and 122); and
- generating audible speech using the prosodic representation of the phoneme data (Fig. 1, item 34, Figs 2 and 3, Speech Output).

Regarding **claim 5**, Addison discloses a text-to-speech system that includes a method with the following steps:

- receiving input text which includes two or more sentences (Fig. 1, item 12; Fig. 2, item 112, n.b. no limitation is put on number of sentences in the text; col. 12, lines 1-19, in this case analysis [by the artificial intelligence program] is performed on two speakers which implies at least two sentences);
- determining semantic information for the input text (Fig. 2, item 114; col. 3, lines 50-63; col. 11, lines 58-68; col. 18, lines 20-28; when processing the text, artificial intelligence rules determine general informational content);

- selecting a speaking style from a plurality of predefined speaking styles based on the identified topic, where each speaking style correlates to prosodic parameters and is associated with one or more anticipated topics (col. 11, lines 45-67; styles: male, female, methodical, etc.; col. 18, lines 20-29; determine the general informational context [topic]); col. 24, lines 15-21; a style is determined); and
- customizing an output parameter of a multimedia user interface of the text-to-speech synthesizer system based on the speaking style, where the text-to-speech synthesizer system is operable to render audible speech which correlates to the input text (Figs 1-3, item 34, speech output system).

Regarding **claim 6**, Addison teaches everything claimed, as applied above (see claim 5). In addition, Addison teaches "the step of determining semantic information further comprises determining a topic for the input text" (Fig. 2, item 114; col. 3, lines 50-63; col. 11, lines 58-68; col. 18, lines 20-28; when processing the text, artificial intelligence rules determine general informational content [topic]).

Regarding **claim 7**, Addison teaches everything claimed, as applied above (see claim 5). In addition, Addison teaches "the step of determining semantic information further comprises partitioning the input text into a plurality of context spaces, and determining a topic for each of the plurality of context spaces" (col. 3, line 63 through col. 4, line 3).

Regarding **claim 9**, Addison teaches everything claimed, as applied above (see claim 5). In addition, Addison teaches "the step of customizing an output parameter further comprises generating synthesized speech" (Figs. 1-3, item 34, Speech output).

Regarding **claim 10**, Addison teaches everything claimed, as applied above (see claim 5). In addition, Addison teaches "the step of customizing an output parameter further comprises correlating the selected speaking style to one or more prosodic parameters and rendering audible speech for the input text using the prosodic parameters" (col. 3, lines 50-64).

Regarding **claim 12**, Addison discloses a text-to-speech system with the following components:

- a text analyzer receptive of input text which includes two or more sentences and operable to determine semantic information for the input text (Fig. 1, item 12; Fig. 2, item 112, 114, n.b. no limitation is put on number of sentences in the text; col. 12, lines 1-19, in this case analysis [by the artificial intelligence program] is performed on two speakers which implies at least two sentences);
- a style selector adapted to receive semantic information from the text analyzer and operable to determine a speaking style for rending the input text based on the semantic information, where the selected speaking style correlates to one or more prosodic attributes (col. 24, lines 15-21; a style is determined; Fig. 2, items 114, 116, 120, 122);

- a phonetic analyzer adapted to receive input text from the text analyzer and operable to convert the input text into corresponding phoneme data (Fig. 1, items 22 and 26);
- a prosodic analyzer adapted to receive phoneme data from the phonetic analyzer and the prosodic attributes from the style selector, the prosodic analyzer further operable to apply the prosodic attributes to the phoneme data to form a prosodic representation of the phoneme data (Figs. 1-3, items 26, 28, 116, 120, 122, 142); and
- a speech synthesizer adapted to receive the prosodic representation of the phoneme data from the prosodic analyzer and operable to generate audible speech (Figs 1 and 3, Speech Output).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Addison in view of Apte et al. (U.S. Patent 6,253,169), hereinafter referred to as Apte.

Regarding **claim 2**, Addison teaches everything claimed, as applied above (see claim 1). In addition, Addison teaches that the text can be analyzed by the artificial intelligence unit to determine a topic (col. 11, lines 53-67; col. 18, lines 20-29; where

the analysis will necessarily involve the words represented in the text), which corresponds to "defining a plurality of anticipated topics, such that each anticipated topic is associated with keywords that are indicative of the topic." But Addison does not specifically teach "determining frequency of the keywords in the input text; and selecting a topic for the input text from the plurality of anticipated topics based on the frequency of keyword occurrences contained therein." However, the examiner contends that these concepts were well known in the art, as taught by Apte.

In the same field of endeavor, Apte discloses a method for improving the accuracy of decision tree based text categorization. Apte's teachings include determining the frequency of words [keywords] in a document [text] to classify [associate a topic with] that document (col. 1, lines 45-65).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Addison by specifically providing the features, as taught by Apte, because it is well known in the art at the time of invention as an effective means of assigning a topic to text.

4. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Addison in view of Sutton et al. (U.S. Patent 6,539,354), hereinafter referred to as Sutton.

Regarding **claim 11**, Addison teaches everything claimed, as applied above (see claim 5). But Addison does not specifically teach "the step of customizing an output parameter further comprises modifying at least one of an expression of a visually

displayed talking head and another attribute of a visual display." However, the examiner contends that this concept was well known in the art, as taught by Sutton.

In the same field of endeavor, Sutton discloses methods and devices for producing and using synthetic visual speech [facial animations] based on natural coarticulation. In addition, Sutton teaches that the animation can support various voice characteristics and emotions (Figs. 5A and 6; col. 4, lines 15-20; col. 14, lines 1-17; e.g. a character emotion can be specified –smile+jawdown+headright).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Addison by specifically providing the animation functionality, as taught by Sutton, because it is well known in the art at the time of invention for the purpose of producing realistic visual lipsyncing (col. 2, line 55 through col. 3, line 19).

Response to Arguments

5. Applicant asserts on page 6:

> Claims 1, 2, 5-7 and 9-12 are now pending in the application. Claims 1, 5, and 12 have been amended to more clearly define Applicant's inventive concept. More specifically, Applicant's invention determines a topic from text comprised of two or more sentences and then selects a speaking style based on an identified topic of the text. Since previously applied references do not teach this aspect of the present invention, it is respectfully submitted that Applicant's claimed invention defines patentable subject matter. The Examiner is respectfully requested to reconsider and withdraw the rejection(s) in view of the amendments and remarks contained herein.

Note the 112 1st rejection in §1. Furthermore, assuming *arguendo* that the above feature is supported by the specification, the examiner maintains that Addison teaches it. First, Addison does not put any limitation on the size of the input text and based on an analysis performed by the artificial intelligence program on this text determines topic and speaking style (col. 11, lines 45-68; col. 18, lines 16-29). In addition, Addison gives an example where the artificial intelligence program analyzes text to identify situations where two speakers are in a conversation (col. 12, lines 14-18), which implies that at least two sentences are input to be able to make that distinction (i.e., one utterance from each speaker). This is further supported by Addison's teaching that "there is a linking together within a word, sentence, paragraph ... where different sounds vary meaning" (col, 3, line 50 through col. 4, line 44) again implying that the analysis and synthesis is performed over multiple sentences.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to V. Paul Harper whose telephone number is (571) 272-7605. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571) 272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

01/06/2006

V. Paul Harper
Patent Examiner
Art Unit 2654